

DANIEL F. WATERS GERMANTOWN DYE WORKS  
37-55 East Wister Street  
Philadelphia  
Philadelphia County  
Pennsylvania

HAER No. PA-213

HAER  
PA  
SI-PHILA  
716-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD  
Northeast Field Area  
Chesapeake/Allegheny System Support Office  
National Park Service  
U.S Custom House  
200 Chestnut Street  
Philadelphia, PA 19106

HAER  
PA  
SI-PHILA  
716-

HISTORIC AMERICAN ENGINEERING RECORD  
Daniel F. Waters Germantown Dye Works

HAER No. PA-213

Location:

37-55 East Wister Street (also including a large portion of the block north and east towards Lena and Collom Streets), Philadelphia, Philadelphia County, Pennsylvania.

Present Owner:

Greater Germantown Housing Development Corporation

Present Use:

Vacant.

Significance:

The Daniel F. Waters Germantown Dye Works is representative of the historical development of the textile industry in Germantown, which was a nationally significant center of textile production in the nineteenth and early twentieth centuries. Dye works were historically located in textile-production areas to facilitate transportation and use of their dyes for coloring fabrics. The major expansions of the Germantown Dye Works in the 1870s and first two decades of the twentieth century illustrate the company's corporate success and response to market demand for high quality dyes and colored fabric. The Germantown Dye Works was one of Germantown's most extensive dye works establishments by the 1880s. Evolving with the technological innovations of the dye and chemical industries, the Germantown Dye Works remained in operation until the plant finally closed in 1981.

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**Project Information:**

The Daniel F. Waters Germantown Dye Works complex along with a vacant lot located at the northeast corner of Germantown and Wister Streets are scheduled for a three-phase project involving the construction of a commercial center, housing for the elderly and affordable town houses. The existing industrial complex structures will be demolished and all construction will be new. Developed by Greater Germantown Housing Development Corporation, a non-profit organization, the commercial center to be called Freedom Square and the housing for the elderly to be called Elders Place. Elders Place will occupy the Germantown Dye Work Site.

Martin Abbott  
Todd Cleveland  
Kise Franks & Straw  
219 North Broad Street  
Philadelphia, Pennsylvania

Sara Jane Elk  
Philadelphia Historical  
Commission  
Philadelphia, Pennsylvania

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Approximately half of the parcel dedicated to the proposed Freedom Square/Elders Place development was once the site of two separate textile establishments. Hinckley Knitting Mills, established in 1840 by Aaron Jones, prospered for a half-century as one of the more successful textile firms in Germantown, specializing in hosiery and fancy knit goods. The Daniel F. Water Germantown Dye Works, adjacent to the Hinckley Mills, was founded in 1863 by William Mills. The Dye Works which operated under only two major owners, the Mills and the Waters families, lasted well into the twentieth century. Only two of the Hinckley Knitting Mills' structures remain from the knitting mills' early era, a stable and a warehouse, which were incorporated into the dyework site in 1955. The Germantown Dye Works, on the other hand, is well represented with a number of buildings.

Philadelphia has long been identified as the nineteenth-century center of textile manufacturing. The textile industry was comprised of various facets, including: knit goods, hosiery, carpets, worsted goods, cotton, woolens, silk, dyeing, and upholstery. The center of Philadelphia's early textile industry was Germantown. Germantown's textile reputation began in the 1830s and was directly linked to the transatlantic migration of English weavers, principally from the districts of Nottingham and Leicester. This migration continued for a half-century, enhancing Germantown's reputation as well as transforming the pre-revolutionary village into an important industrial center. In one particular decade, the 1870s, the population of Germantown increased 43 percent. This dramatic increase was the result of both suburban development and the growth of the textile industry - in 1880, over 3,000 persons were employed in 56 establishments.

The Daniel F. Waters Germantown Dye Works was established in the 1860s by William Mills. Mills occupied a dwelling on East Wister Street, and his business, historically listed at 53-55 East Wister Street, operated out of buildings constructed to the rear of his house. Deed research reveals that Mills, listed as a dyer in the 1864 City Directory, purchased the parcel on Wister Street from Gottlieb Kolb in 1863 for \$2,000. The dye works underwent a major building expansion in the 1870s including an addition of a new and large dyehouse (40' x 130'), as well as two smaller dye houses, internally linked to the main dye house. The dye works was cited in 1883 as one of the most extensive dye works establishments in Germantown, employing 46 people.<sup>7</sup>

Early in 1889, William Mills, listed in deed as "Gentlemen (formerly Dyer)" transferred the operation of the business to his son Radcliffe B. Mills, "Dyer," who had joined the firm in 1874. In 1890, Radcliffe Mills took a \$10,000 mortgage from the Mutual Fire Insurance Company. Various circumstances occurred during this time which resulted in Radcliffe Mills selling the business in 1892 to his attorney. One possibility may have been the effect of the nationwide depression of the textile industry and/or his difficulty with making the mortgage payments. Radcliffe B. Mills, "in consequence of sundry losses and misfortunes and other causes and considerations", transferred the business to Maurice B. Jones, "assignee for the benefit of the creditors of Radcliffe B. Mills".<sup>8</sup> (No relationship was

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established between this Jones and the Joneses of the Hinckley Knitting Mills.) Within the year, the property was sold to George Miller, "under and subject to the payment of a certain mortgage of ten thousand dollars".<sup>9</sup> It is believed that Miller had trouble making payment with the mortgage and sold the property to Daniel F. Waters, a dyer, in 1896.

Waters' imprint on the Germantown Dye Works is more evident than William Mills', not only because he was of a latter generation, but also because he expanded the operation's buildings considerably through alterations, demolitions, and new construction. Waters undertook a major building campaign in the early 1900s, extending the dye works to Lena and Collum (formerly Jefferson) Streets. The result of this expansion was a densely built-up site with a variety of structures, linked internally. Daniel F. Waters "was recognized as an authority in the textile-dyeing industry and frequently was consulted by Congressional committees during the First World War".<sup>10</sup> He was also the first president of the Master Dyers Association of Philadelphia. In 1923, Waters was joined by his sons in operating the dye works. The Waters family operated the Germantown Dye Works until 1981 expanding their line to include various other chemical products over the years. The mill property itself, however, is remarkably intact with many of the structures still possessing a high degree of historical and architectural integrity for its period of significance.

### Footnotes

1. Philip Scranton, Proprietary Capitalism, The Textile Manufacture at Philadelphia, 1800-1885 (Cambridge: Cambridge University Press, 1983), 181.
2. Ibid., 231.
3. Ibid., 286.
4. Daniel Robson, editor, Manufactures and Manufacturers of Pennsylvania of the Nineteenth Century (Philadelphia: Galaxy Publishing Company, 1875), 316.
5. E. Hexamer, Map of Hinckley Knitting Mills, Aaron Jones' Sons (Philadelphia, 1879).
6. Scranton, 233.
7. Lorin Blodget, Census of Manufactures of Philadelphia, 1883 (Philadelphia, Dickson & Gilling, 1883), 88.
8. Deed Book TG.257:281. Philadelphia Recorder of Deeds.

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9. Deed Book WMG.56:33. Philadelphia Recorder of Deeds.
10. Obituary, "The Philadelphia Inquirer" (October 12, 1953).

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**CHAIN OF TITLE - Daniel F. Waters Germantown Dye Works**

April 7, 1848	William Alburger to Gottlieb Kolb. Deed Book GWC.59:462.
January 9, 1863	Gottlieb Kolb to William Mills, Dyer. \$2,000. Deed Book ACH.74:474.
January 1, 1889	William Mills to Radcliffe B. Mills. \$1.00 Deed Book GGP.451:524.
May 2, 1892	Radcliffe B. Mills to Maurice Jones. \$1.00 Deed Book TG.155:443.
October 15, 1892	Maurice Jones to George Miller. \$3,100. Deed Book TG.257-281
February 8, 1896	George Miller to Daniel F. Waters, Inc. Deed Book WMG.56:33.
May 17, 1901	Joseph Loveland to Sarah A. Waters. Deed Book JMH.215:503.
April 8, 1923	Daniel F. & Sarah A. Waters to Daniel F. Waters & Sons, Inc. \$1.00 Deed Book JMH.3312:594.

Separate Parcel:

March 19, 1894	Standard Building and Loan of Germantown to Margaret Corwell. Deed Book TG.399:309.
December 2, 1901	John & Margaret Corwall to Daniel F & Sarah Waters. Deed Book JV.318:267.
December 30, 1933	Daniel F. Waters, widower to Daniel F. Waters & Sons. Deed Book DWH.1145:593.
June 26, 1981	D. F. Waters & Sons, Inc. to Gene Minnick. Deed Book EFP.241:461.

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August 23, 1983      Gene Minnick to Gilbert A. and Mary Ann Natale.

December 8, 1983      Gilbert A. and Mary Ann Natale to Mary Ann Natale.  
Deed Book FHS.132:241.

June 9, 1989      Mary Ann Natale to the Greater Germantown Housing  
Development Corporation.  
Deed Book D.1371:209.

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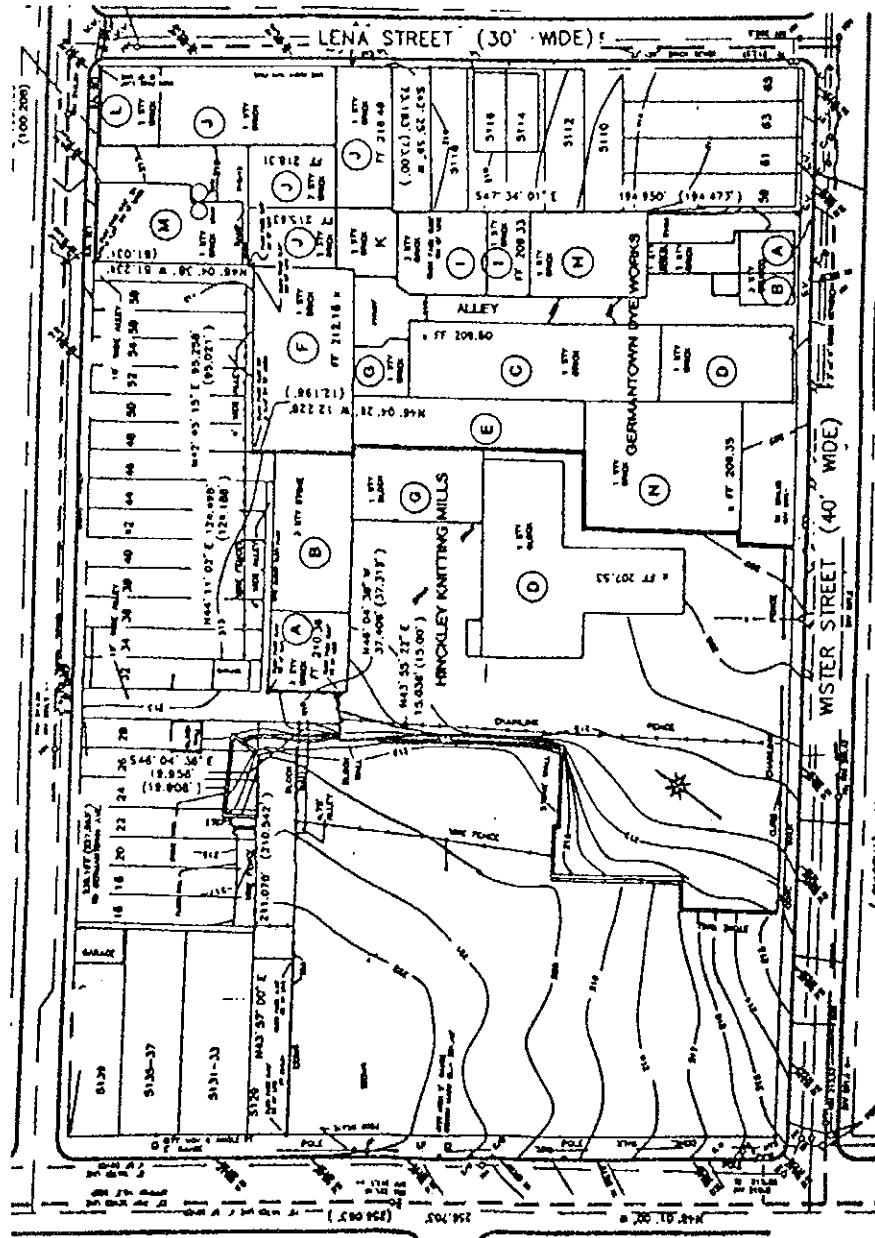
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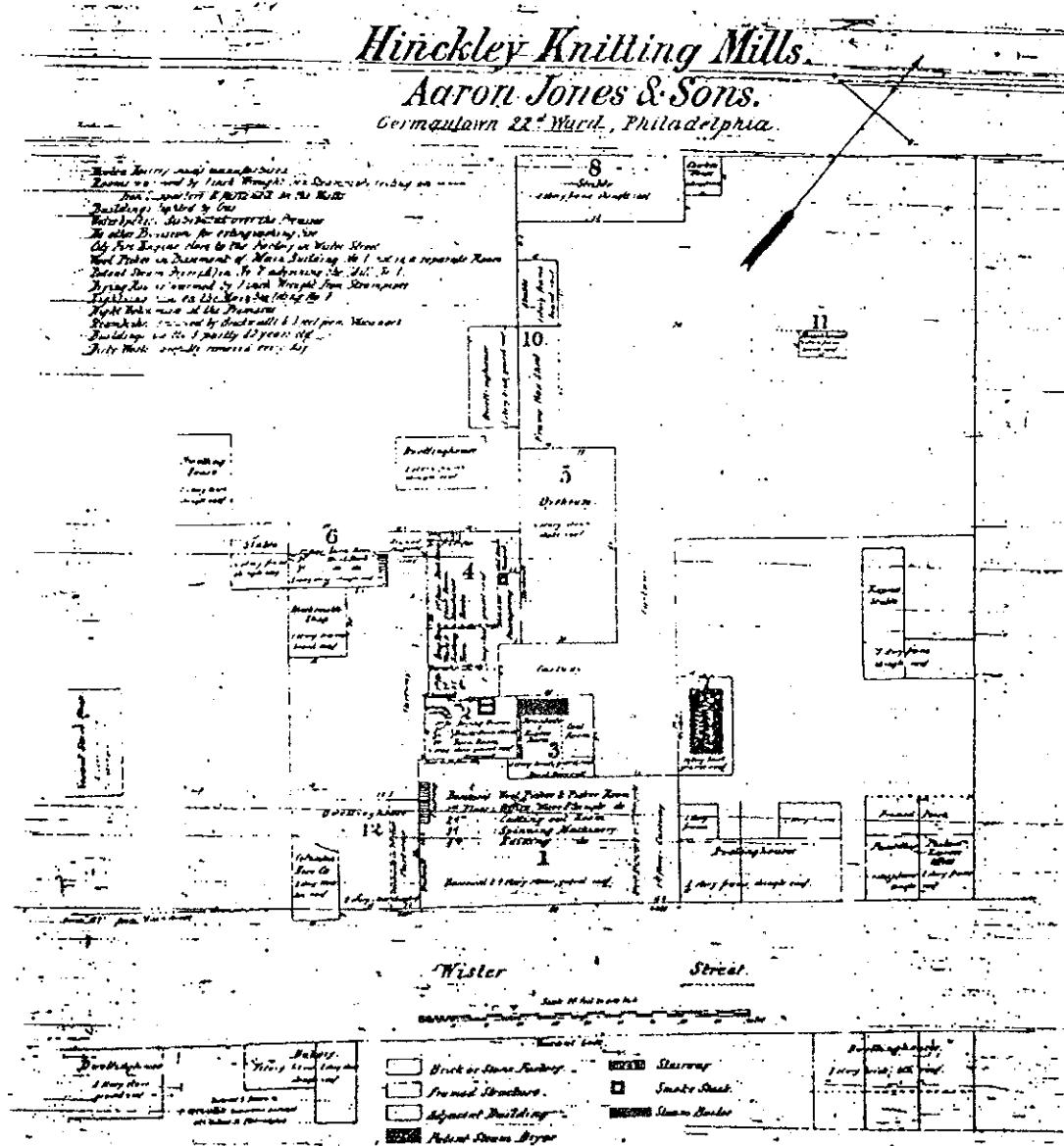


Fig. 3. Hexamer, E. Hinckley Knitting Mills, Aaron Jones & Sons.  
Philadelphia: circa 1866. Plate 156.

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- Wm. Mills & Son,  
Dye Works.

*Germantown, 22d Ward, Philadelphia.*

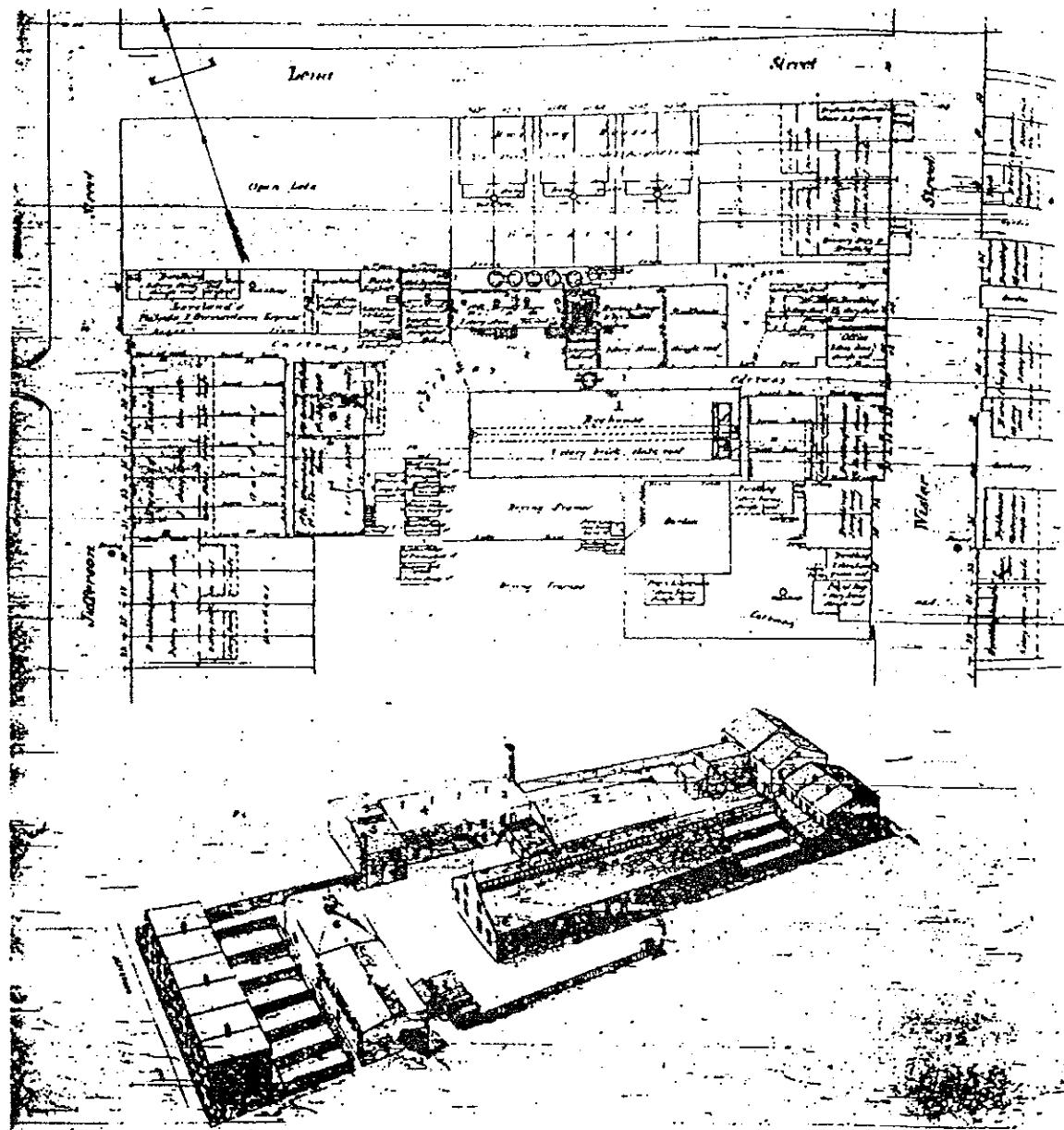
**Manufactured:** Dye and Dry Color, and Water Fast.  
**Raw Cotton:** Dyed Color, and Water Fast.—Dye and Dry treatments result in property of raw cotton  
which is 10 handles (2% more, 2 longer).

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5. *Monograph*

**Fig. 4. Hexamer, E. Wm. Mills & Son, Dye Works. Philadelphia:**  
1875. Plate 925.

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**Fig. 5. Hexamer, E. Wm. Mills & Son, Dye Works. Philadelphia: 1875. Plate 926.**

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*Wm. Mills & Sons'*  
*Dye Works,*

Germanatown, 22d Ward, Philadelphia, Pa.

**MANUFACTURE:** Dyed and Dry Colors and Woolen Yarn.  
**Raw Goods:** Dyed Colors and Woolen Yarn.—Dyed and Dry materials small quantity  
of raw cotton, over 1000 lbs. to 15,000 pounds at a time.  
**BALLET:** 31 hands (labor, 3 help).

Revised March, 1878.  
E. Hexamer,  
601 Walnut St., Phila.

**OWNER:** Wm. Mills...  
**BUILDINGS USED:** by the person...  
**NAME:** Wm. Mills and Sons' Dye Works...  
**AGE:** Nos. 1 and 2, old after building on Water street erected 1873—Nos. 3, 4, and Mr. Mills' dwelling house on Water street built 1845—No. 5, erected 1866—No. 6 built 1873—3 buildings on Water street erected 1845—6 buildings on Jefferson street built 1870 and 1871—No. 7 erected 1871.  
**LOCATION:** situated between Water and Jefferson, south of Locust street, Occidental Philadelphia, Pa.—  
**CONSTRUCTION:** good; buildings covered in a substantial manner—Double wall on North side of No. 4—  
**CONTRACTORS:** Mr. J. C. H. T. & Co.—  
**EXTERIOR:** brick; building covered in a substantial manner—Double wall on North side of No. 4—  
**INTERIOR:** brick walls, ceiling, floor, and joists, covered in a substantial manner—brick walls, ceiling, floor, and joists, covered in a substantial manner—  
**FIREPLACES:** chimneys projected by brick masonry, so that the power used will be sufficient of stone joints, forming part of chimney—  
**ROOFING:** No. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10—No. 3, 4, 5, 7—No. 6, 8, 9, 10—No. 10—  
and 11—No. 5, 7, 8, 10—No. 6, 8, 10—11 and 12—No. 11, 12, 13, 14, 15, 16—  
Office building 14—15—16—  
**WALLS:** No. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10—No. 3, 4, 5, 7—No. 6, 8, 9, 10—  
—No. 4, 5, 7—No. 1, 2, 3, 4, 5, 6, 7—Office building 15—16—  
**ROOF:** see no diagram—  
**CEILINGS:** partly of wood, partly of plaster—  
**FLOORS:** partly of wood, partly of wood, covered with carpet—  
**COLUMNS:** of No. 1 and 2, of brick; of No. 3 of brick covered with thin surface of No. 3, and 3, 4, and 5, wood-covered—  
**STAIRCASE:** in roof of stable—  
**PORCHES:** none—  
**LADDERS:** No permanent ladders attached to the buildings—  
**DOORS:** none—  
**LODGISTS:** Room 1 painted on No. 1, one on No. 3, one on No. 6, one on No. 7, Mr. Mills' dwelling house and one on stable door—  
**YARD:** Nos. 1, 2, 3, and 1st floor of Nos. 4 and 5, 10 wooden planters—Floor of fire and coal hole of brick—Plants in 10 wooden tubs—Ground floor in 1st story of No. 6—  
from old floor in 1st and 2d story of No. 6—  
**STAIRCASE:** located as per plan, not named—iron stairways from 1st to 2d story of No. 1—  
**ELEVATORS:** none—  
**ROOFING:** as outside building—  
**CONSTRUCTION:** in a fine building and well built and plastered—Covering in 2d story of No. 1, wood; other ceilings not finished—  
**WATER CLOSET:** outside to the yard—  
**MANURE BINS:** none—  
**YARD:** none

**WOOD SHUTTERS:** no wood shutters made on the premises—  
**SHUTTERS:** Board covered by 1" wrought iron shingles, roofing on iron—No. 3, not covered—  
**STAIRCASE:** Oak located in center of office building—1 end from door to 2d story of No. 1 well covered—  
**LIGHTING:** lamps lighted by gas, supply from city gas works—  
**WATERWORKS:** Night watchman constantly on the premises—  
**WATERCLOSET:** none—  
**BOTTLES:** located on a plain, enclosed by brick walls, in proper distance of wood work—  
**STOVE:** made of brick, plastered inside, rising 10 feet above the roof of No. 6—  
**STOVE ROOF:** top small stone engine connected with the stove—A horse-power each—  
**STOVE:** brick located outside of No. 2 for carrying of the gas from the engine—  
**PIPE:** Asbestos and—  
**PIPE:** copper oil used on machinery, one barrel kept on a stand in workshop No. 1—  
**ACID:** 10 casks of nitric acid, oil of vitriol and muriatic acid, kept at a time under shed 15' wide of No. 1—  
**DRUMS:** Ordinaries—done by steam—  
**STAIRS OR STAIRCASE:** none—  
**DETACHMENT:** Small drying room in No. 6, with wooden floor, floor and ceiling painted in 1st story, heated by 1" wrought iron shingles, roofing on iron girders and brick piers—  
—Furnace dried by atmospheric air in 1st story of No. 1, with wooden floor and ceiling not finished—Drying room in No. 1 with floor old floors, iron girders, iron stairs, and iron door communicating with the 1st story of No. 1—Drying room heated by natural heat of stone boiler and by short iron flue in 1st story—  
**DOORS:** 1000 per year—  
**PAINTERS:** no estimators found—  
**PAINT:** Black's glass glaze, painting paint (1) in No. 1, not especially for atmospheric air without 1" iron shingles—Paint supplied by No. 10 under contract, and also connected with city water—Painting paint supplied before and underneath of windows No. 1—  
**WATERCLOSET:** 1 iron watercress in No. 1 with 10" dia. 2" outlet used for supplying dye tanks—System of pipes and outlets shown on plan—  
**ROOF:** 3000 feet of slate have been attached to plan—  
**SEPARATE:** none—  
**WATERCLOSET:** 2 iron watercress in 1st & 2d floor No. 1 supplied by city waterworks and painting paint (1)—Watercress for supplying the dye tanks and others before—  
**DOORS:** 1000 per year—  
**PAINT:** Black's glass glaze, painting paint (1) in No. 1, not especially for atmospheric air without 1" iron shingles—  
**OPEN SKYLIGHT:** Painted white, painted—  
**STAIRS:** Fireproofed as per plan—  
**PIPE:** Asbestos pipe, 1" diameter—  
**CAVE OR MAMMOTH:** none—  
**SEPARATE:** Definition of each—  
**WATERCLOSET:** larger pipes—  
**DOORS:** 1000 per year—  
**PAINT:** Black's glass glaze, painting paint (1) in No. 1, not especially for atmospheric air without 1" iron shingles—  
**IRON BELLIES:** 4 large ones—1 iron cast—  
**IRON:** none

Wall without window or openings (Blank).  
Wall with window or openings.  
Wall extending about the roof (looped).  
Partition Wall.  
Stair or Brick Building.  
Plastered Building.  
Slipped Building.  
LAD. Staircase.

Brick Building.  
Plastered Building.  
Slipped Building.  
LAD. Staircase.

Fig. 6. Hexamer, E. Wm. Mills & Sons', Dye Works,  
Philadelphia: 1878. Plate 1240.

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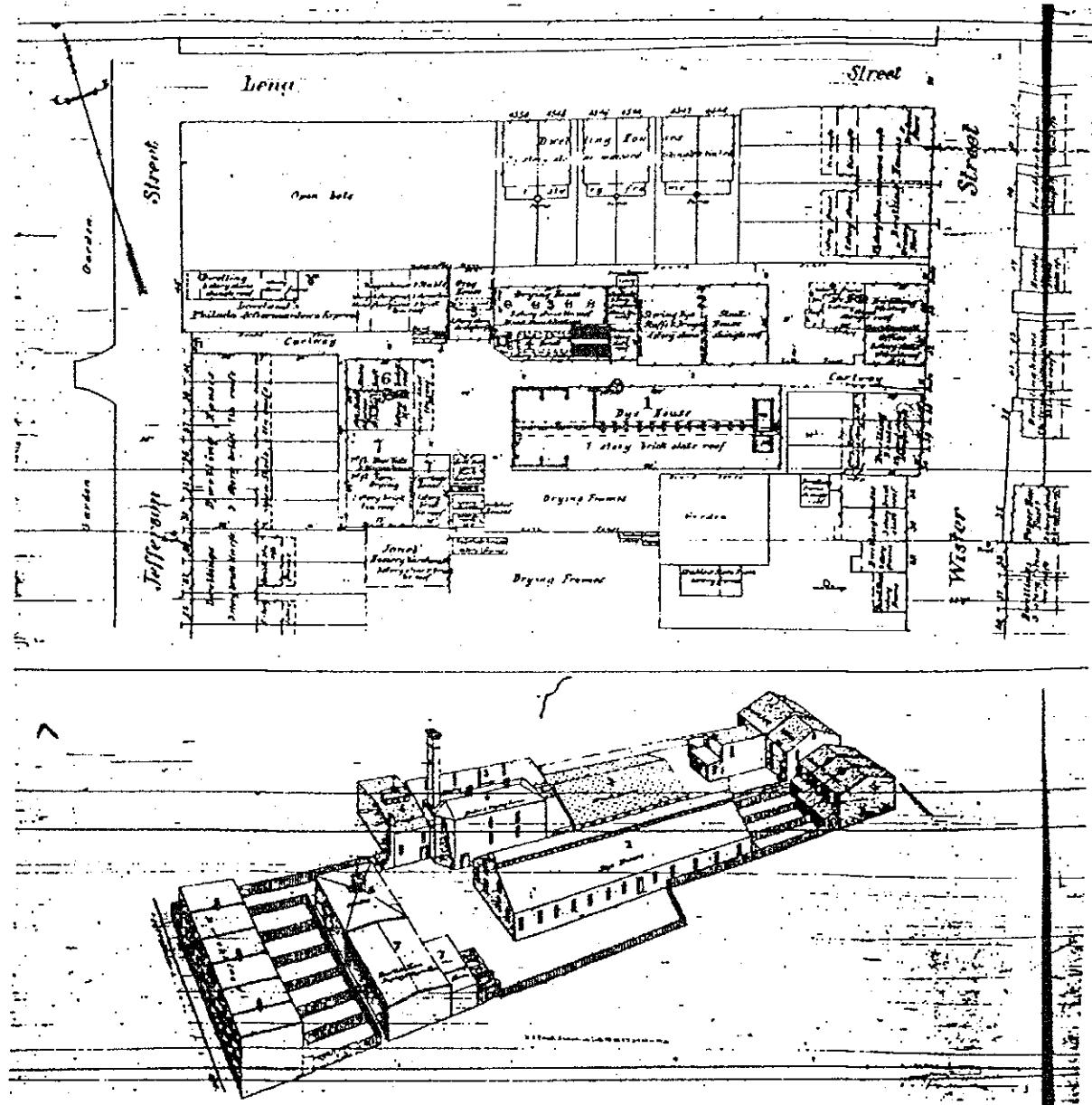


Fig. 7. Hexamer, E. Wm. Mills & Sons', Dye Works.  
Philadelphia: 1878. Plate 1241.

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*Hinckley Knitting Mills,  
Aaron Jones' Sons,  
Germantown, 22d Ward, Philadelphia.*

*Germantown, 22d Ward, Philadelphia.*

**Manufactures**—Pewsey Wool Goods and Worsted.  
Sheep Stock—Wool, Coarse Threaded Worsted Yarns—No Cotton Spinning—  
Process of Spinning, I. cotton, I. wool  
Farmhouse—250 Heads (50 acres, 140 sheep, 150 goats).  
Surveyed March, 1873.  
**K. Basset,**  
144, Finsbury Street, Phila.

**HEATING**—Boiler heated by 1<sup>st</sup> wrought and 2<sup>nd</sup> cast-iron stovespipes resting on brick.

**STOVE**—1 cast-iron stove in No. 1, and 1 in kitchen room, 1st floor of No. 3, well received.

**SUMMERS**—Sound and in good order.

**LIGHTING**—Boiler heated by gas, supply from city pipe-lines.—Open lights used.—One enclosed gas lantern in stable and carriage house.

**KITCHEN**—Night watchman on the premises.

**KITCHEN CLOCK**—Widely scattered with 19 keys distributed throughout the walls; keys required to be driven every hour.

**BALCONY**—Located as per plan, reached by bracketed, or proper distance of, woodworks.

**BASE STOKE**—Of brick, plastered inside, rising 30 feet above the ground.

**STEEL RAILINGS**—1, 25 and 18 horsepower.—Will bear one ton.

**HOTELS**—Wood houses in 1st floor of No. 3 for keeping prime plates.—Brick houses in 3rd and 4th.

**PUBLIC**—Indoor coal.

**DRIVE**—Land on road on west, barrel kept at 6 times in his care in basement of No. 1; lumbering on land on machinery, I barrel kept at 6 times in his care in basement of No. 1.

**ATTIC**—6 in number of mastic acid and oil of vitriol kept outside in the yard.

**UPRIGHT ORTHOPEDIA**—Dried by steam.

**BRIDGE**—Amen.

**DRYING**—Wood dried by steam drying machine in 3d floor of No. 4, 1/4 mile on river opposite to 2 miles.  
Floor above the iron grating and 20' above the atmosphere.—Tarn drying room in 2d story of No. 4, with wooden back floor and ceiling not finished, heated by 1<sup>st</sup> wrought-iron stovespipes resting on stone.—Tarn dried by atmosphere and in 2d story of No. 4.

**PICKLE**—Wood pickles and yellow in basement of No. 1; wooden keg in pickle room and covering not flattened.—One light commissary used in pickle room.—Pickle not allowed to run on a loose platter.

**CLOSET**—In 2d story of No. 1, not covered.—Open lights used in serving room.—Occulters—As per plan.

**PROVISIONS FOR ESTHOMAS FINA**—Per Scales.—About 30 prepared type fire brackets kept on No. 1 and 3, always filled City Steel Plate Works 1 mile.

**STREET FIREPLACES**—As per plan.

**CLASS OF MANUFACTORY**—Good.

**GENERAL CONDITION OF THE PROPERTY**—Good.

**ESTIMATED EXPENSES**—As per plan.

**ITEMS**—1 wood planer, 1 wainscots, 3 set cards C in a set, 8 hand mallets (300 spindles each), 3 dividers, 3 squares, 50 paper boxes with fasteners attached, 4 hand hammers, 2 little wenders, 4 spades, 5 saws, 6 round frames, 150 circular wood boards, 100 lumbermen, 1 heavy machine, 1 heavy & large-drawing frames, 10 hand blacking machines, 10 double-wire wrens, 10 hand binding frames, 10 casting machines, 1 power press, 1 hand press, 2 sledges, 2 pair rollers, 1 mortising box, 31 dye vats, 2 kites, 2 ladders, 2 mallets and 1 mason.

Wall with windows or openings.  
 Wall with fire door.  
 Wall extending above the roof (height: 2 meters wall).

Задачи  
 Наглядность.

Fig. 8. Hexamer, E. Hinckley Knitting Mills, Aaron Jones' Sons.  
Philadelphia: 1879. Plate 1351.

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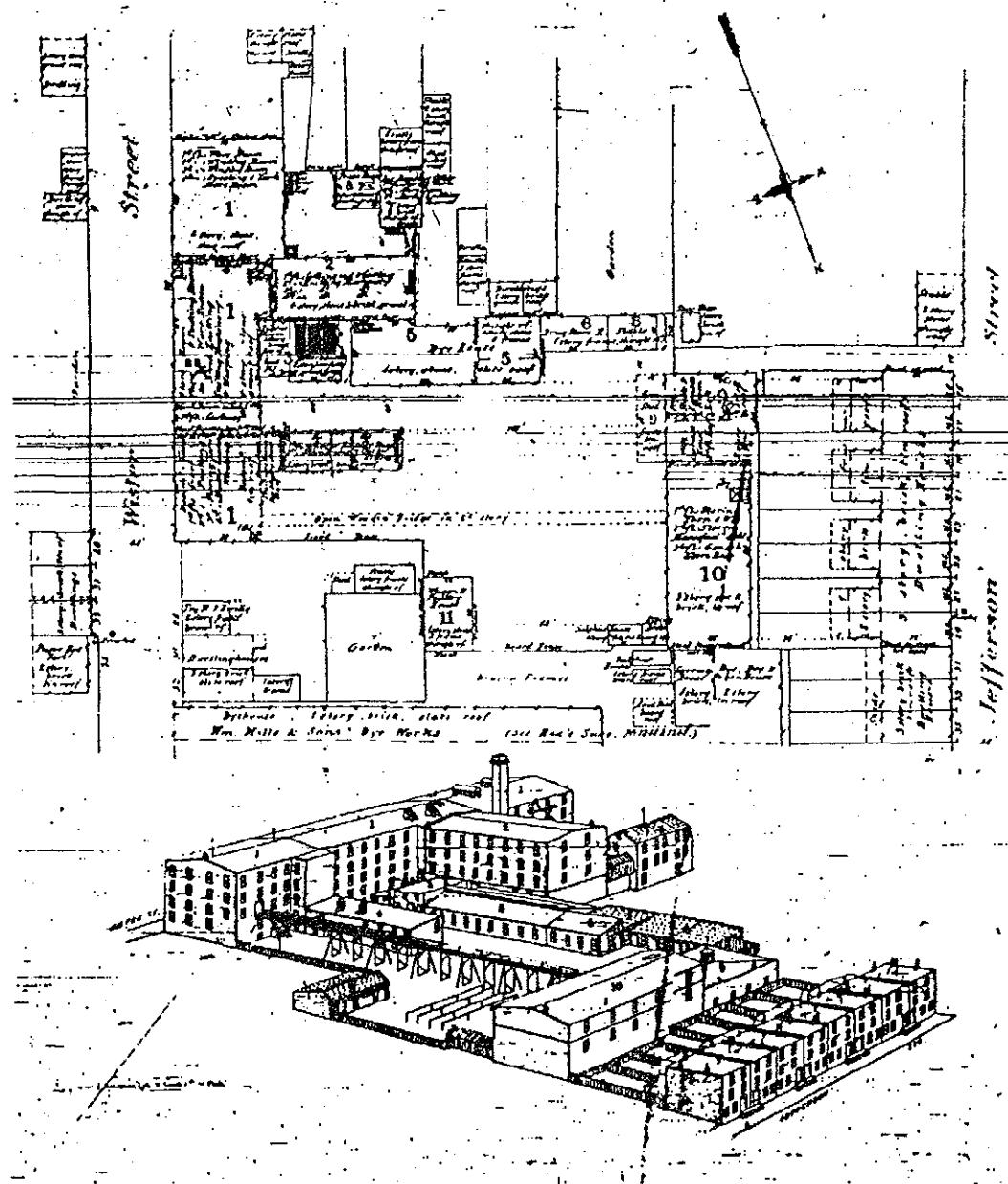


Fig. 9. Hexamer, E. Hinckley Knitting Mills, Aaron Jones' Sons.  
Philadelphia: 1879. Plate 1352.

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*Hinckley Knitting Mills,  
Aaron Jones' Sons,*

*Germinators, 22d Ward, Philadelphia.*

**MANUFACTURE** - Fancy Tea Goods and Household - No partners or spreading done on the premises.  
**RAW STOCK** - Woolens, Cotton and Worsted Yarns.  
**EMPLOYING** - The hands 100 men, 28 boys, 149 girls.  
Begun July 1, 1851.  
E. Heasman,  
235 Main Street, Pottsborough, Pa.

**OWNER**—*James Tamm, Esq.*  
**SUPERINTENDED**—*By the owners.*  
**NAME**—*Waverley Esplanade.*  
**AGE**—*Built in 1864—Re-tiled 1873, extended 1875; and 1899—No. 1  
and 4 built 1814—No. 1 re-tiled 1873—No. 12 built 1876—No. 1 re-tiled 1873,  
and 1899.*  
**LOCATION**—*Situated between Rittenhouse Square and South Street.  
Opposite Franklin Institute.*  
**CONSTRUCTION**—*Wood.*  
**COMMUNICATIONS**—*Franklin Square, No. 1, 2, 3 and 4, adjoining and communicating by  
openings in wooden doors.*  
**POWER**—*Steam.*  
**HEIGHT**—*No. 1, 16'-0"-18'-0"-19'-0"-19'-0"-and 18'-  
No. 2, 3, 4 and 12—No. 1, 18'-0"-19'-0"-and 18'-  
No. 10, 11'-0"-19'-0"-and 18'-No. 9, 18'-0"-and 18'-  
No. 11, 18'-0"-and 18'.*  
**LENGTH**—*See plan.*  
**WALLS**—*No. 1, 16'-0"-38'-0"-and 30'-0"-30'-0"-11'-0"-  
No. 2, 3, 4, 10, 11, 12, 13, 14, 15'-0"-18'-0"-18'-  
No. 16, 21'-  
18'-0"-18'-0"-18'-0"-and 11'-0"-No. 9, 9'-0"-and 11'-0".*  
**DOOF**—*per pair.*  
**COLUMNS**—*In basement of No. 1 (North of entrance), of iron. Other columns of wood,  
of polygonal thickness.*  
**BUTTERS**—*Choice of meat.*  
**CORRICE**—*Brick courses on No. 10—Wood board courses on No. 9 and on shading  
courses—Courses of Nos. 1, 2, 3, 4 and 6, of wood.*  
**BOTTLE**—*In the roof of No. 1 and 10, and ladders to them.*  
**PORCH**—*None.—Open wooden bridge from 3d story of No. 1 to 3d story of No. 10, with  
wooden door at each end.—Wooden bridge from 3d story of No. 1 to No. 1.*  
**LADDERS**—*From 1st story escape means of new extension, from 1st story to roof, with platform in every story.*  
**TOWER**—*No. 10—Wooden cupola on roof of No. 10.*  
**LIGHTS AND ROOF**—*On Nos. 1, 2, 3 and 4 on the shading courses (see view); will have  
glass panels on all buildings.*  
**FLOORS**—*1-1/2" yellow pine flooring boards, not arranged for floating.—Brick floor in  
kitchen room.—Wooden panel flooring in galleries and stables.*  
**WINDOWS**—*As per plan and more.*  
**STAIRWAYS**—*Located as per plan, of wood, panel.*  
**ELEVATORS**—*None.*  
**HATCHWAY**—*1-1/2" wooden panel hatches of (a, c) in No. 1, open underneath and every  
story by wooden door—Open hatches (b) in No. 10 protected by metal cage—2 pairs  
hatchways M (c, e) in No. 9 for carrying goods from key loft to stable—Open hatches  
(f) in No. 1 for heating goods from M to M stories.*

**CEILINGS:**—In office, 1st floor of No. 1, and drying room, 2d floor of No. 1, lathed and plastered.—Boarded ceiling to stable, No. 4.—Other ceilings not described.

**MACHINE SHOP:**—None.

**TORGE:**—None.

**WOOD SHAVINGS:**—Wood shavings made in the repair shop, 10 1/2 floor of No. 1 and 1st floor of No. 4, stored in large piles.—Shredded wood shavings.

**HEATING:**—Burns natural gas by atmospheric gasometer heating system.

**STOVES:**—1 cast iron stove in No. 1 and 1 m. furnace room, 1st floor of No. 2, well secured.

**STOVEPIPES:**—Soldered and good order.

**LIGHTING:**—Rooms lighted by gas, or from roof over gas pipe from gas works.—Open lights used.—One enclosed gas burner in stable and carriage house.

**BATHROOM:**—Plumbed, unheated on the premises.

**WATCHCLOCK:**—An old clock with 12 hour dial mounted throughout the walls, kept repaired to be struck every hour.

**BOILERS:**—Located as per plan, anchored by brick walls to proper distance of wood works.

**SMOKE STACK:**—Of brick, plastered inside, rising 90 feet above the ground.

**STEAM ENGINES:**—Three, 15, 10 and 3 horsepower.

**HEATER:**—Brass heater in first floor of No. 1 for heating press plates.

**FUEL:**—Anchored Coal.

**GILS:**—Introducing oil used on machinery, one barrel kept at a time so as can be freely stored by the day.

**ACIDS:**—6 to 8 cartons of various acids used and out of which kept outside in yard.

**DYEING OPERATIONS:**—Done by steam.

**SIZING:**—None.

**DRYING:**—Tannery, drying room to 1st story of No. 1, stock wooden tall floor and ceiling not finished, heated by 17 wrought-iron atmospheric gasometer heating system as over.—Tannery also dried by atmospheric heat in another room in 2d story of No. 6.

**OCCUPANCY:**—As per plan.

**PROVISIONS FOR EXTINGUISHING FIRE:**—

**FIRE BUCKETS:**—About 50 galvanized steel fire buckets kept in Nos. 1 and 2, always clean.

**CITY STEAM FIRE ENGINE:**—Wagon 9 1/2 ft. x 6 ft. wide.

**STREET FIREPLACES:**—As per plan.

**CARE IN MANAGEMENT:**—None.

**GENERAL CONDITION OF THE PROPERTY:**—Good.

**EXTERNAL EXPOSURES:**—None per plan.

**MACHINERY:**—20 power houses each 14x20x10 ft., 3 hand looms, 9 broken menders, 4 spindlers, 4 wire nippers, 2 doublets, 1 top wire nippers, 13 broken mending machines, 10 hand knitting frames, 10 spinning machines, 1 paper press, 1 hand press, 1 whetstone, 2 pair refiners & 4 reworking hammers, 20 ft. metal, 1 table, 3 hoppers, 2 engines and 3 pumps, 1 early feeder balanced, 1 flywheel feeder and 1 flywheel feeder balanced, 2 wire frames, 223 circular round frames, 32 Belmont frames, 15 double rip and very moderate 4 ft. diameter round frames.

Fig. 10. Hexamer, E. Hinckley Knitting Mills, Aaron Jones' Sons.  
Philadelphia: 1881. Plate 1558.

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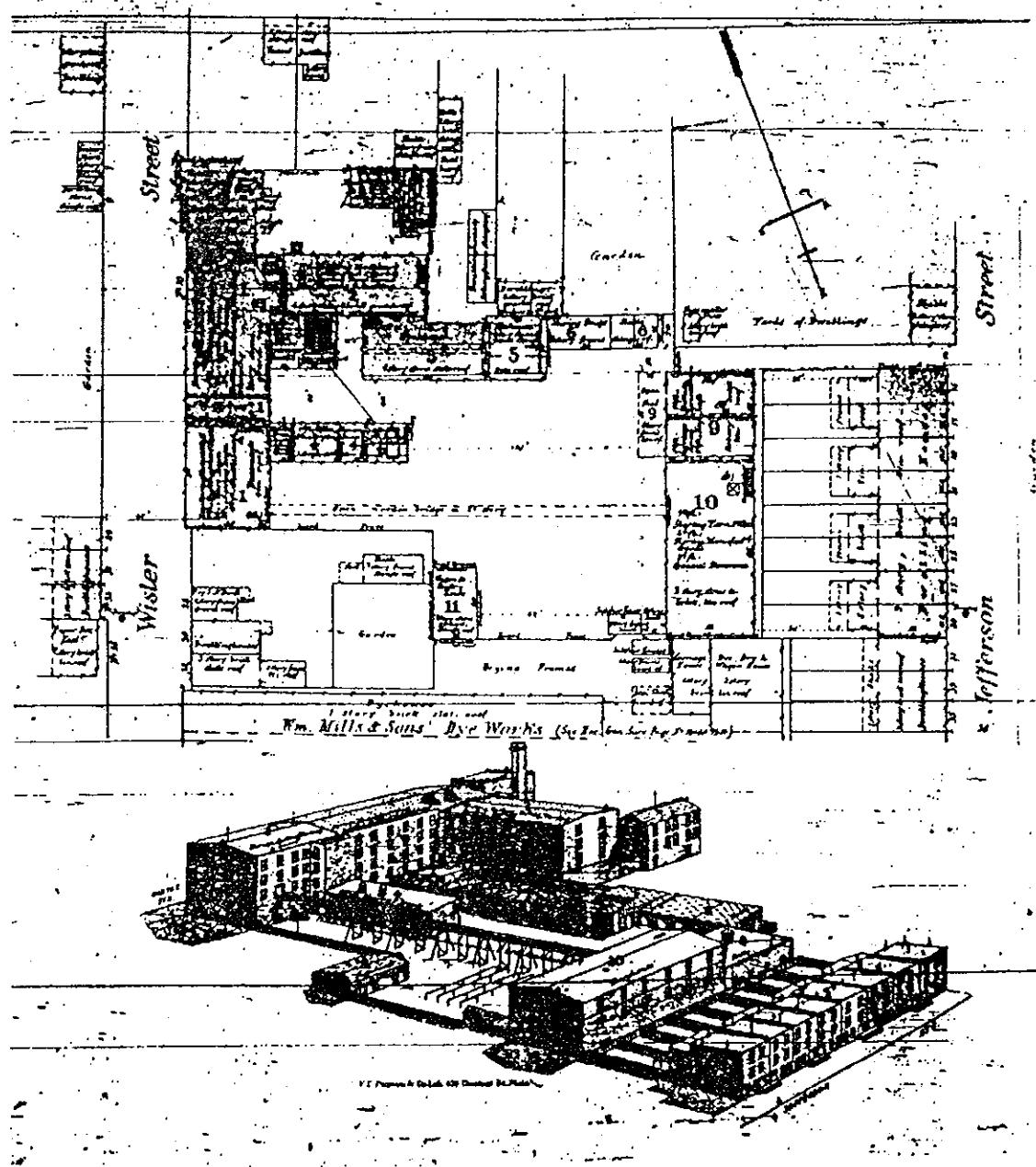


Fig. 11. Hexamer, E. Hinckley Knitting Mills, Aaron Jones' Sons.  
Philadelphia: 1881. Plate 1559.

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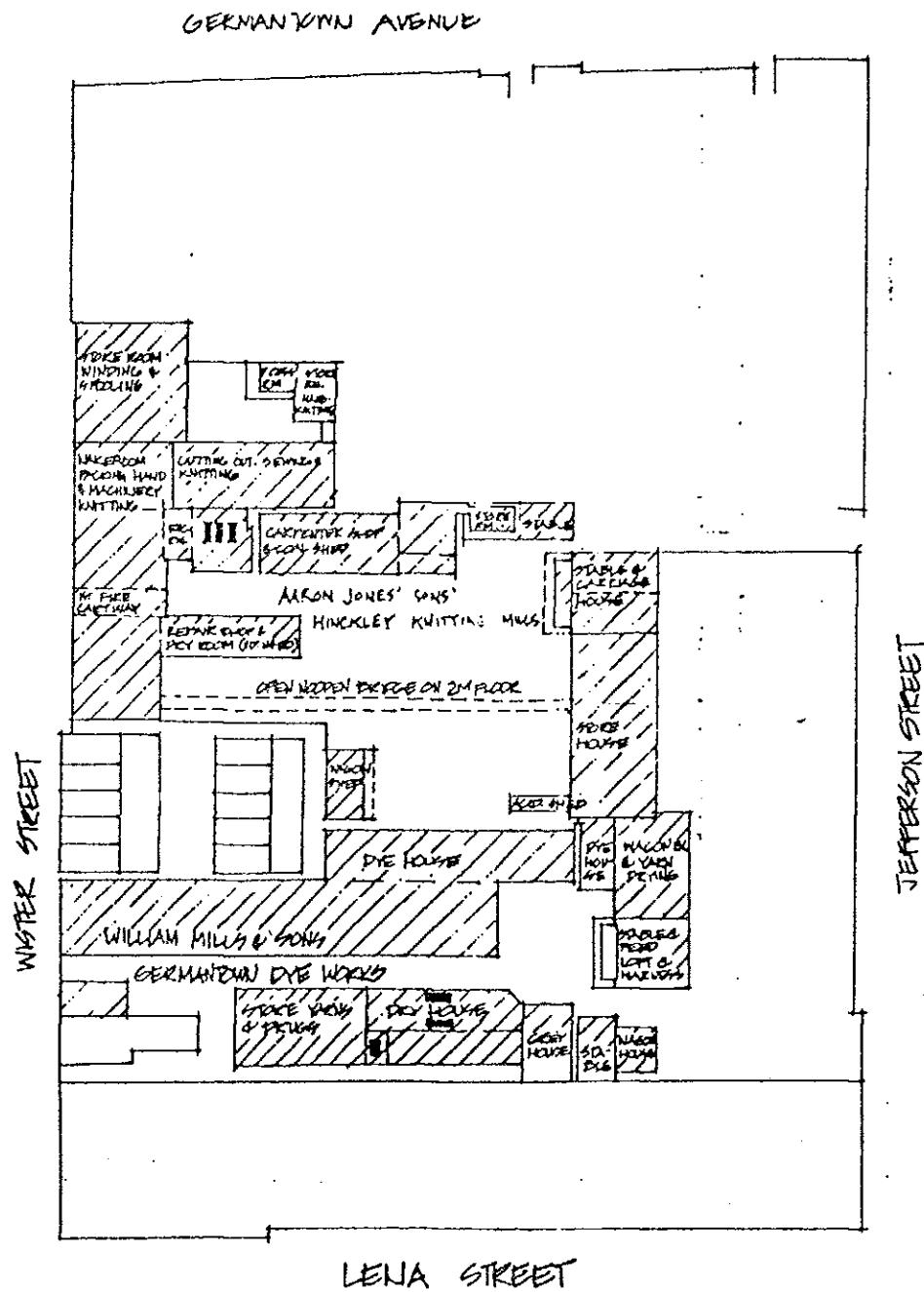


Fig. 12. Hexamer, E. & Son. Atlas of Philadelphia, Ward 22.  
Philadelphia: 1890. Volume XVI - Plate 305.

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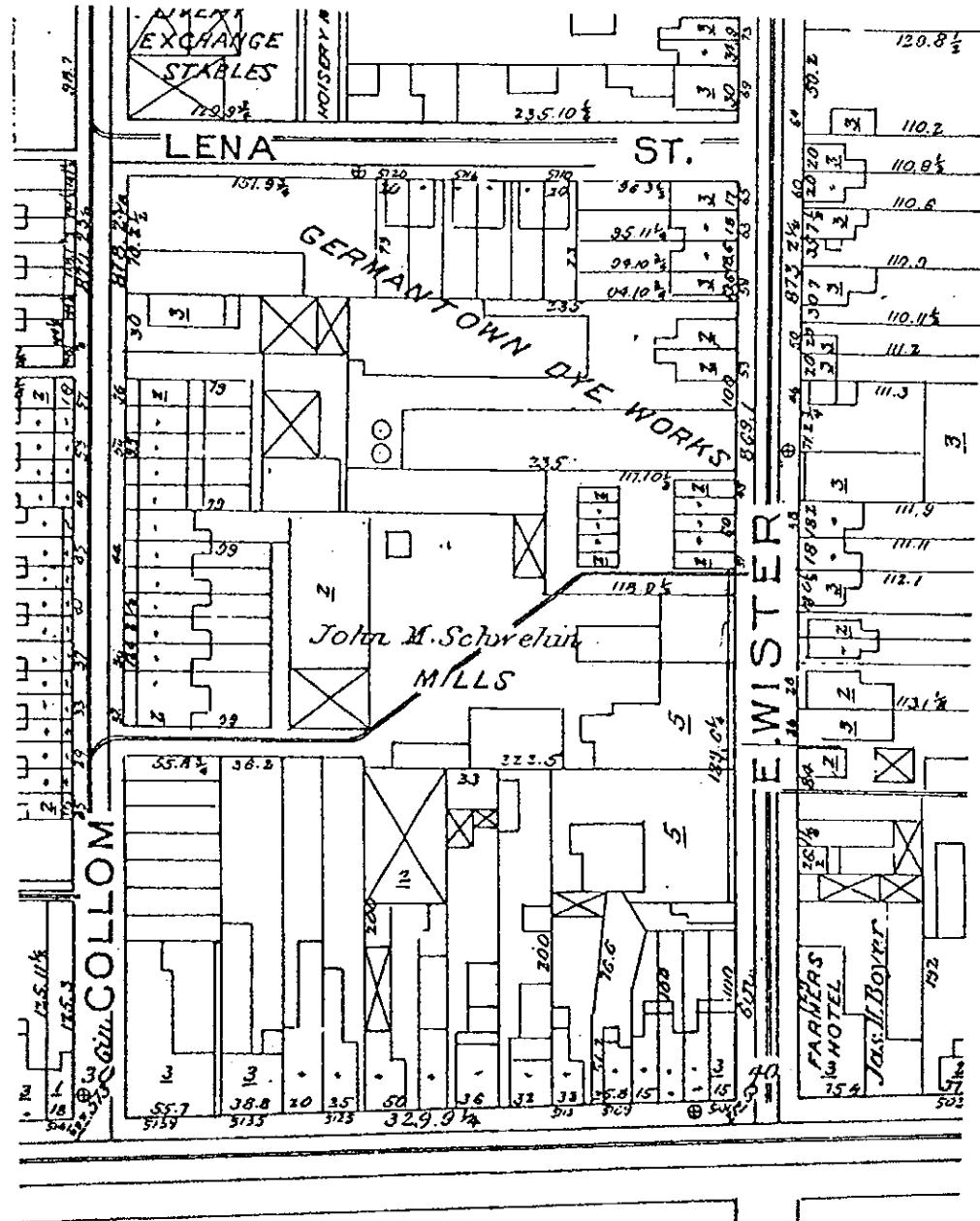


Fig. 13. Smith, J. L. Atlas of the 22nd and 42nd Wards of the City of Philadelphia. Philadelphia: 1906. Plate 4.

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GERMANTOWN AVENUE

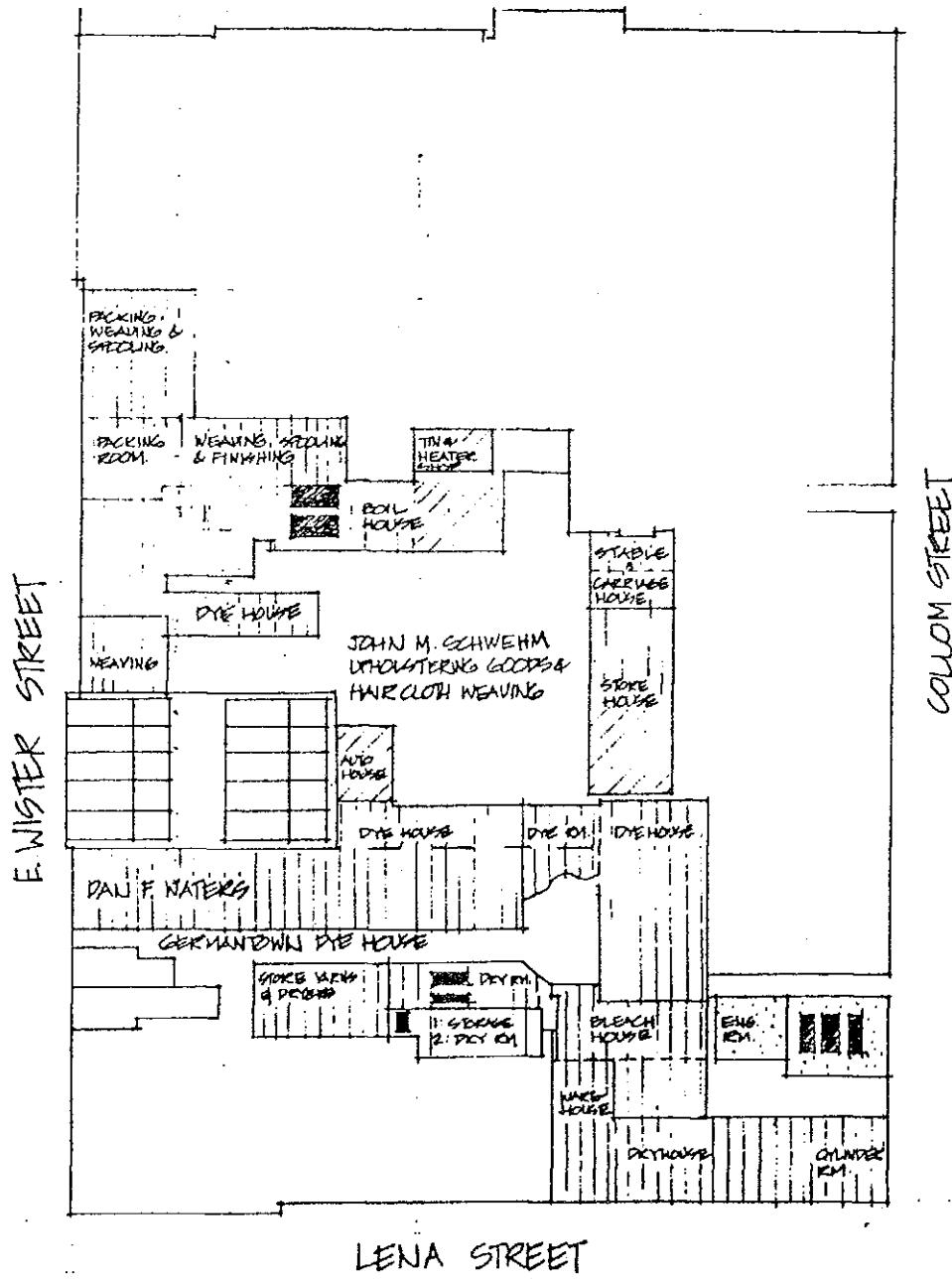


Fig. 14. Bromley. Knitting Mills and Germantown Dye Works, 1911. Plate 2.

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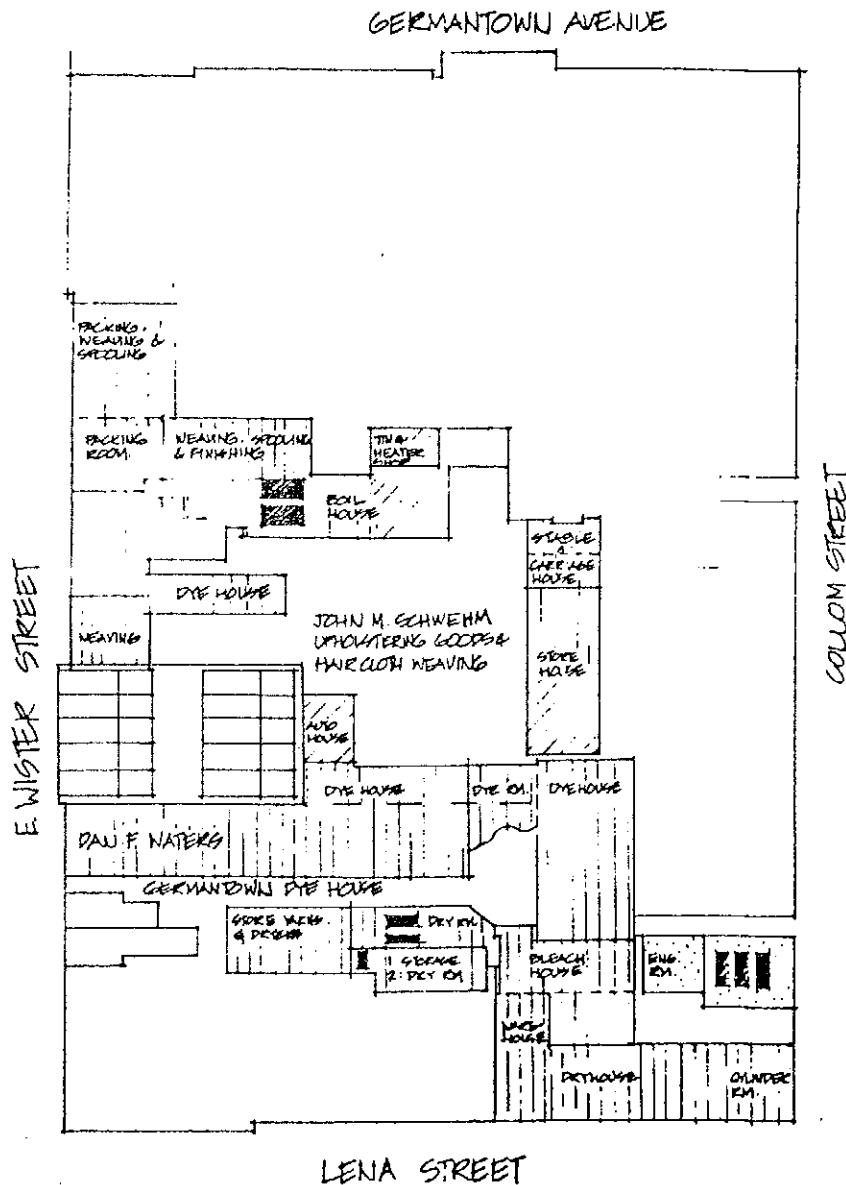


Fig.15. Hexamer, E. & Son. Germantown Dye Works and Knitting Mill. 1908, revised 1922. Volume XVI. Plate 305.

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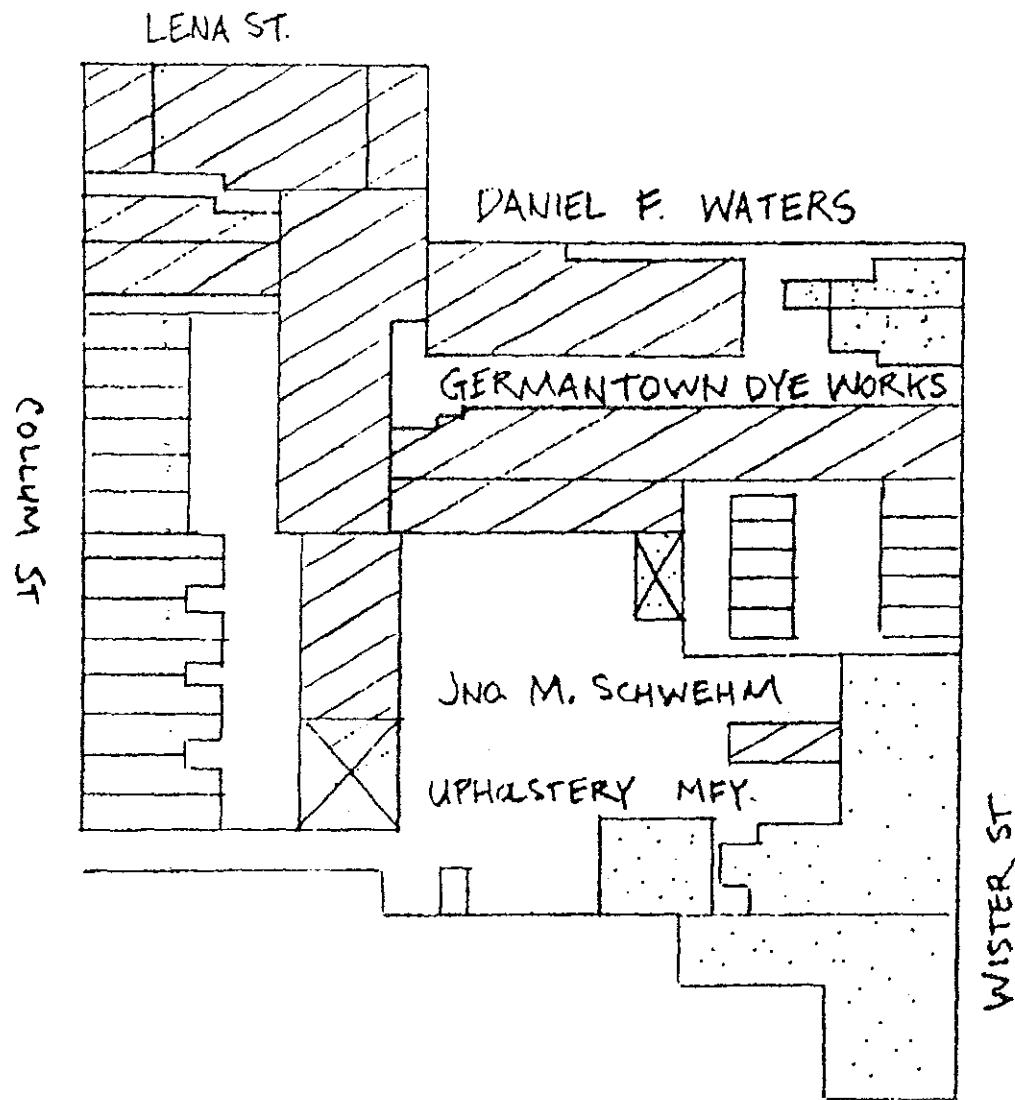


Fig. 16. Bromley. Germantown Dye Works and Knitting Mill,  
1923. Plate 2.

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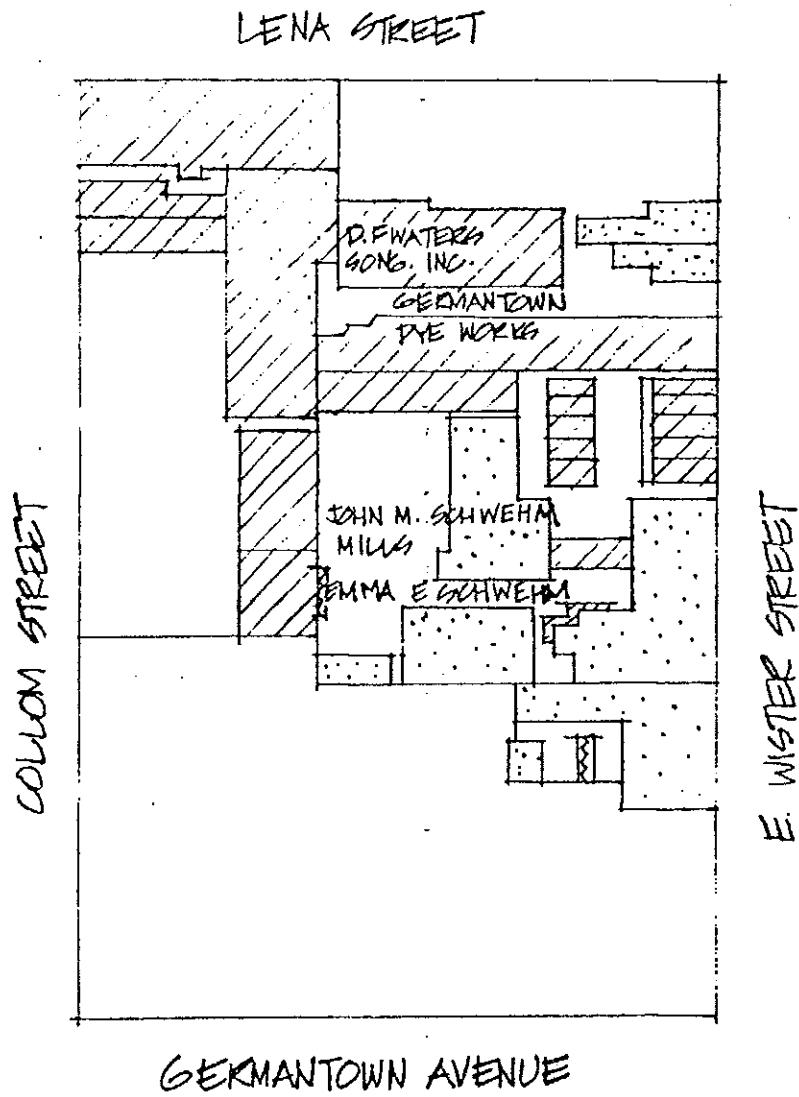


Fig. 17. Franklin Survey Company. Franklin's Property Atlas of  
22nd Ward. Philadelphia: 1955. Plate 2.